

Curriculum Vitae
of
Thomas E. Murray

Professor of Biology
Elizabethtown College
One Alpha Drive, Elizabethtown, PA 17022
murrayte@etown.edu

Birth Date April 1, 1964, Warwick, NY

Revised April, 2014

Date of Appointment August 22, 1994

Education

Ph.D. 1994, University of Connecticut
M.S. 1990, University of Connecticut
B.A. 1986. College of the Holy Cross

Experience

2005- Professor, Elizabethtown College
1998-2005 Associate Professor, Elizabethtown College
1994-1998 Assistant Professor, Elizabethtown College

Professional Societies

American Society of Limnology and Oceanography; Pennsylvania Academy of Science; North American Lake Management Association, Ecological Research and Education, Network, *Beta Beta Beta*.

Grants as Principal Investigator or Co-Principal Investigator

2013 National Science Foundation. “_RUI:Collaborative Research: A Research Network and Training Model at Primarily Undergraduate Institutions for Macrosystems Projects: Stream Metabolism and Non-Native Shrub Impacts” \$2,317,813. Not Funded.

2002, Jessica Hopper and Thomas E. Murray. Pennsylvania Academy of Science Grant. “Measuring the Effectiveness of Non-Point Source Phosphorus Management: Lake Placida, Elizabethtown, PA. \$500. Funded.

1996-2000. National Science Foundation Grant, “Geographic Information System (GIS) Modeling to Predict Non-Point Source Nutrient Loading in an Agricultural Drainage”. \$227,461. Not Funded.

1995-1997, National Science Foundation ILI-IP Grant, “The Use of an Automated Ion Analyzer in an Environmental Science Curriculum”, NSF#DUE9550818, \$36,000.

1995-96, Elizabethtown College Faculty Grant, “The Use of a Laboratory Microcosm to Study Benthic Respiration and Nutrient Cycling in Lakes”, \$2,139.

1994, Co-Principal Investigator, University of Connecticut Research Foundation Grant, "Determination of Ecosystem Variables Using Laboratory Microcosms", \$1,000.

1992-1993, Co-Principal Investigator, University of Connecticut Institute of Water Resources Grant, "Sulfur, Iron, and Phosphorus in Lake Sediments", USGS Grant # 14-08-001-G2009 \$17,190.

1991-92, Co-Principal Investigator, University of Connecticut Institute of Water Resources Grant, "The Impacts of Sulfur and Iron on Phosphorus Dynamics in Lake Sediments", USGS Grant # 14-08-0001-G2009 \$19,837.

Grants as Participant

2014. National Science Foundation Ecosystem Studies Preliminary Proposal. "Developing predictive models of gross primary productivity and ecosystem respiration in streams at broad spatial scales. Not Invited for Full Proposal.

2010 Pennsylvania Department of Environmental Protection and United States Environmental Protection Agency. "Conewago Creek Stream Restoration Projects". \$209,000. Funded.

2009 Chesapeake Bay Stewardship Fund, National Fish and Wildlife Foundation. Conewago Creek Conservation Initiative - \$750,000. Funded.

2008 Pennsylvania Department of Environmental Protection and United States Environmental Protection Agency. "Hershey Meadows Stream Restoration Project (Phase 2). \$220,000. Funded.

2006. Pennsylvania Department of Environmental Protection and United States Environmental Protection Agency. "Hershey Meadows Stream Restoration Project (Phase 1). \$34,000. Funded.

2005. Pennsylvania Department of Environmental Protection. "Expanding Best Water Management Practices at Lake Placida: The Aquifer Recharge and Reclamation Project" Funded.

2004. Susquehanna River Basin Commission Grant for Mapping the Conewago Creek Watershed. Funded.

2004-2005, Whitaker Foundation Regional Grant Program, "Increasing Student Research in the Biology Curriculum". \$155,000

2003-2006, Pennsylvania Department of Environmental Protection and United States Environmental Protection Agency "TMDL Watershed Implementation Plan" Research Partner with the Tri-County Conewago Creek Association. \$75,500

2003, Pennsylvania Department of Environmental Protection. Pennsylvania Energy Harvest Grant: "Establishing Rural Biomass Energy Conversion as a Source of Energy." – \$971,935 Not Funded

2001, Pennsylvania Department of Environmental Protection. "Lake Placida: Improving Water Quality and Educating the Public", \$90,000

Research Interests

Phosphorus and Water Quality in Temperate Lakes; Biogeochemical Cycles; Acid Rain and Lake Eutrophication; Stream Restoration.

Presentations at Meetings

North American Lake Management Society Symposium; 2009
Pennsylvania Academy of Science; 1995-1998, 2000, 2002-2006, 2008, 2012
Pennsylvania Watershed Conference; 2003
American Society of Limnology and Oceanography; 1993, 1994, 1995
International Society of Theoretical and Applied Limnologists; 1998
American Fisheries Society, Boxborough, MA; 1992
Connecticut Institute of Water Resources; 1991
Urban Non-Point Source Pollution and Stormwater Management Symposium; 1990
Ecological Society of America; 2012
Mid Atlantic Chapter of the Ecological Society of America; 2014

Invited Presentations

Conewago Creek Monitoring Plan, PA DEP, South Central Regional Office, February, 2011.
Stream Monitoring Workshop, Harrisburg Area Community College, December, 2009
Conewago Creek Watershed Presentation to PA DEP Secretary Katie McGinty, August, 2003
Lancaster County Watershed Conference, November, 2002
CASE Conference, February, 2000
Millersville University, April, 1999
Pennsylvania State University, Harrisburg, November, 1996

Publications

Simmons, J. M. Anderson, W. Dress, C. Hanna, D. Hornbach, A. Janmaat, F. Kuserk, J. Marsh, T. Murray, J. Niedzwiecki, D. Panvini, B. Pohlad, C. Thomas and L. Vasseur. 2014. A Comparison of the Stream Temperature Regime Under Forested and Non-Forested Riparian Zones at Eleven Sites Across North America. *River Research and Applications*. In Review

Murray, T.E. and J.J. Hopper. 2003. Nutrient Reduction Following Wetland and Littoral Zone Restoration in a Small Lake. *Journal of the Pennsylvania Academy of Science* 77: 75-81.

Murray, T.E. 2000 A Laboratory Microcosm Study of Volumetric Respiratory Quotients. *Verh. Internat. Verein. Limnol.* 27: 1-3.

Murray, T.E. 1995. Loss of Iron to the Sediments of a Softwater Lake: Implications for Internal Phosphorus Loading. *Can. J. Fish. Aquat. Sci.* 52: 1190-1194.

Murray, T.E. and J.F. Gottgens. 1997. Historical changes in phosphorus accumulation in a small lake. *Hydrobiologia* 7:1-6.

Murray, T.E. and P.H. Rich. 1995. Respiratory Quotients Predict Increases in Reducing Power During Summer Stratification. *Can. J. Fish. Aquat. Sci.* 52: 1183-1189.

Haley, S.T., J.F. Cavender, and T.E. Murray. 1999. Detection of *Alexandrium tamarensis* by Using Rapid PCR Analysis. *Biotechniques* 26: 88-91.

Furjanic, S.M. and T.E. Murray. 1996. The Use of Limestone for Phosphorus Precipitation in a Hypereutrophic Pond. *Journal of the Pennsylvania Academy of Science* 70: 83-87

McNamara, W.J. and T.E. Murray. 1997. Presence of Heavy Metals in Three Rural Stream Ecosystems. *Journal of the Pennsylvania Academy of Science* 70: 98-104

Nikolaidis, N.P., T. Koussouris, T.E. Murray, I. Bertahas, A. Diapoulis, and K. Gritzalis. 1996. Seasonal Variation of Nutrients and Heavy Metals in *Phragmites australis*: Implications for Lake Management. *Lake and Reservoir Management*, November 1996: 364-370.

Rich, P.H. and T.E. Murray. 1991. Deicing Salts in an Urban Drainage Basin. *Verh. Internat. Verein. Limnol.* 24: 162-165.

Grant Reviewer

The Pennsylvania Academy of Science, 2002-12
Israeli National Science Foundation - 1998
The Center for Field Research, 1994-2000
U.S Geological Survey, 1995-2000

Professional Referee

The Journal of the Pennsylvania Academy of Science. 2003-
Messiah College Distinguished Professorship – 2000.

Graduate Advisory Committees

George W. Knoecklein, Ph.D. 1997, University of Connecticut
Sean Furjanic, M.S. 1998, Pennsylvania State University
Michael King, M.S. 2001, Pennsylvania State University
Michael Bonham, M.S. 2001, Pennsylvania State University

Book Chapters Reviewed

2002 – Cunningham and Saigo, *Environmental Science, a Global Concern*
1999 - Castro and Huber, *Marine Biology*
1999 - Enger and Smith, *Environmental Science, A Study of Interrelationships*

College Service

Biology Department

Chair ('04-'10)

Associate Chair (Spring, '04)

Search Committee for Provost and Senior Vice President

Chair – 2006-07

Search Committee for the Dean of Faculty (Fall '09)

Strategic Planning Task Force ('04-'06)

Strategic Planning Committee ('11-'12)

Co-Chair

Academic Council ('99-'01, '11-'14)

Council Chair (Fall '00-Spring '01)

Council Vice Chair ('13-'14)

Executive Council (Fall '00- Spring '01)

Professional Standards Committee (Fall '01-Spring '05)

Chair ('04-'05)

Judicial Council (Fall '08-Fall '10)

Chair ('09-'10)

Instructional Resources and Technology Committee

Chair ('96-'99, '02-'04)

Instructional Resources and Technology Committee (AC rep - '99)

Ad hoc Committee on Core Implementation (Summer '02)

Experiential Learning Task Force (2003-04)

Web Oversight Committee (2003-06)

Science Building Committee (2004-07)

Campus Life Council ('96-'99)

Risk Management Committee ('98-'99)

Information Technology Design Team ('97-'98)

Middle States Self Study – Mission/Vision Working Group ('07-'08)

Middle States Self Study - Information Resources Working Group (Spring '98)

Academic Computing Director Search Committee - **Chair** (Summer '97)

Fall Orientation Committee ('96-'99)

Faculty Workload Committee ('98-'99)

Ad Hoc Honors Program Committee ('98-'99)

Ad Hoc Committee on Real World Learning (Summer-Fall '13)

Other Professional Affiliations

2002-Present Board of Directors, Tri-County Conewago Creek Association

2002- Present Member, Tri-County Conewago Creek Association.

2007-Present – Advisor, Lower Susquehanna Center for Land and Water

2008-2009 – Member, Task Force on Chesapeake Bay Tributary Strategy

2009- Present Conewago Initiative Advisory Committee and Monitoring Team

Abstracts Published

Breza, L., H. Brubach, A. Steele, and T.E. Murray. 2014. Conewago Creek Assessment: determining the state of impairment in an agricultural watershed. Mid Atlantic Regional Meeting of the Ecological Society of America, April, 2014.

Costik, B., J. Royer, and T.E. Murray. 2014. Water quality improvements in Lake Placida following installation of a new dam. Mid Atlantic Regional Meeting of the Ecological Society of America, April, 2014.

Simmons, J., M. Anderson, W. Dress, J. Frick-Ruppert, C. Hanna, D. Hornbach, A. Janmaat, F. Kuserk, J. March, T. Murray, J. Niedzwiecki, D. Panvini, B. Pohland, C. Thomas and L. Vasseur. 2012. Effect of riparian shade on stream water temperature: A collaboration among eleven primarily undergraduate institutions. Ecological Society of America, August, 2012.

Niles, C. and T.E. Murray. 2012. Riparian Buffer Impacts and Stream Temperature Changes in a First Order Pennsylvania Stream.. Pennsylvania Academy of Science, April, 2012.

Faust, D.R. and T.E. Murray. 2010. Seasonal Changes in a Small Pond in Auburn, PA: A Pre-Restoration Study. *Beta Beta Beta* Regional Convention, March, 2010.

Faust, D.R. and T.E. Murray. 2010. Seasonal Changes in a Small Pond in Auburn, PA: A Pre-Restoration Study. Ecological Society of America, Mid- Atlantic Meeting, April, 2010.

Murray, T.E., Hinder, D., Turnock, K., Lauer, T. and A. Tan. 2009. Nutrient reduction in the Lake Placida system after installation of upstream wetlands and littoral zone reconstruction. 29th International Symposium of the North American Lake Management Society, October, 2009.

Lauer, T., Tan, A. and T.E. Murray. 2008. Nutrient reduction in the Lake Placida system: Five years after installation of upstream wetlands and littoral zone reconstruction. Pennsylvania Academy of Science, April, 2008.

Choc, S. and T.E. Murray. 2006. Success of Riparian Buffer Strategies along the Conewago Creek. Pennsylvania Academy of Science, April, 2006.

Zimmerman, K. and T.E. Murray. 2004. Impact of new littoral plantings on lake water quality. Pennsylvania Academy of Science, March, 2004.

Wirt, M., T.E. Murray, and J. Fry. 2004. Heavy Metals and Nutrients in the Conewago Creek Watershed. Pennsylvania Academy of Science, March, 2004.

Hopper, Jessica J. and Thomas E. Murray. 2003. Non-point source nutrient management in a small lake. Pennsylvania Academy of Science, April, 2003.

Posegate, A.L., T.E. Murray, and R.L. Laughlin. 2002. Application of Geographic Information Systems (GIS) to Evaluate Wetland Species Composition Pennsylvania Academy of Science, April, 2000.

Gabriel, C. and T.E. Murray. 2000 The Impacts of Heavy Metals on Benthic Invertebrate Diversity Pennsylvania Academy of Science, April, 2000.

Czerwinski, C. T.E. Murray and R.L. Laughlin. 2000. Bioaccumulation of Triclopyr in *Xenopus laevis* Pennsylvania Academy of Science, April, 2000

Bonham, M. and T.E. Murray. 2000. Differential Bioaccumulation of Heavy Metals in Fish Pennsylvania Academy of Science, April, 2000

O'Donnell, J. and T.E. Murray. 2000 . Use of barley straw as an algicide in lake management. Pennsylvania Academy of Science, April, 2000

Sturtz, L.A. and T.E. Murray. 1998. Effect of Sulfites on Bioluminescence of *Vibrio fischeri*: Application to sulfite sensitivity in humans. Pennsylvania Academy of Science, April 1998.

Haley, S., Cavender, J. and T.E. Murray. 1998. A Rapid Technique for the Detection of *Alexandrium tamarensis*. Pennsylvania Academy of Science, April, 1998.

Furjanic, S.M. and T.E. Murray. 1996. The Use of Limestone for Phosphorus Precipitation in a Hypereutrophic Pond. Pennsylvania Academy of Science, April, 1996

McNamara, W.J. and T.E. Murray. 1996. Examination of the Correlation Between Landfill Leachate and Heavy Metal Concentration in Streams. Pennsylvania Academy of Science, April, 1996

Cessna, S., K. Killeen, S. Wilcke, & T.E. Murray. 1995. Differential nutrient loading to a small lake. Pennsylvania Academy of Science, April. 1995.